

2010 National Fire Code of Canada (NFC)

2013 Revisions Package

Selected replacement pages have been produced for the NFC.

Please print and insert in your copy of the Code.

Revisions and Errata

Issued by the Canadian Commission on Building and Fire Codes

The Change History table that follows describes revisions, errata and editorial updates that apply to the National Fire Code of Canada 2010:

- Revisions are changes deemed urgent that have been approved by the Canadian Commission on Building and Fire Codes.
- Errata are corrections to existing text.
- Editorial updates are provided for information purposes only.

Code pages containing revisions and/or errata are identified with the words “Amended Page” in the footer; pages with editorial updates are not flagged.

Contact your local authority having jurisdiction to find out if these revisions and errata apply in your province or territory.

Change History — National Fire Code of Canada 2010

Division	Code Reference	Change	Date (Y-M-D)	Description of Change
Preface	n/a	editorial update	2012-12-21	Text referring to application statements was deleted as these statements are no longer being published
B	1.3.1.1.(1)	revision	2013-10-31	Date stated in Sentence was revised to read “30 June 2012”
B	Table 1.3.1.2.	revision	2013-10-31	Document references were updated as applicable to reflect more recent editions published as of June 30, 2012
B	Table 2.14.1.1.	erratum	2012-12-21	Attributions were added for Sentence 2.3.2.3.(2)
B	Table 3.4.1.1.	erratum	2012-12-21	Attributions for Sentence 3.2.7.5.(6) were deleted
B	Table 3.4.1.1.	erratum	2012-12-21	Attributions were added for Clause 3.2.7.8.(1)(b)
B	4.3.9.2.	erratum	2012-12-21	Article 4.3.10.2. was moved and renumbered Article 4.3.9.2.
B	4.3.9.3.	erratum	2012-12-21	Article 4.3.10.3. was moved and renumbered Article 4.3.9.3.
B	4.5.6.1.(1)	erratum	2012-12-21	Sentence was corrected to read “Except for vent risers and ...”
B	Table 4.12.1.1.	erratum	2012-12-21	Attributions were added for Sentence 4.1.7.3.(1)
B	Table 4.12.1.1.	erratum	2012-12-21	Attributions for Sentence 4.2.9.5.(1) were deleted
B	Table 4.12.1.1.	erratum	2012-12-21	Attributions for objective OS1.1 for Sentence 4.3.12.3.(6) were deleted
B	Table 4.12.1.1.	erratum	2012-12-21	Attributions for Clause 4.3.13.5.(2)(a) were deleted
B	Table 4.12.1.1.	erratum	2012-12-21	Attributions were added for Sentence 4.3.13.6.(1)
B	Section 6.7.	erratum	2012-12-21	Title of Section was corrected to read “Smoke Alarms and Carbon Monoxide Alarms”
B	6.7.1.1.(3)	erratum	2012-12-21	Sentence was corrected to read “Carbon monoxide alarms ...”
B	Table A-1.3.1.2.	revision	2013-10-31	Document references were updated as applicable to reflect more recent editions published as of June 30, 2012

Part 1 General

Section 1.1. General

1.1.1. Application

1.1.1.1. Application

1) This Part applies to all *buildings* and facilities covered in this Code. (See Article 1.1.1.1. of Division A.)

1.1.2. Objectives and Functional Statements

1.1.2.1. Attribution to Acceptable Solutions

1) For the purposes of compliance with this Code as required in Clause 1.2.1.1.(1)(b) of Division A, the objectives and functional statements attributed to the acceptable solutions in Division B shall be the objectives and functional statements identified in Sections 2.14., 3.4., 4.12., 5.7., 6.8. and 7.4. (See Appendix A.)

Section 1.2. Terms and Abbreviations

1.2.1. Definitions of Words and Phrases

1.2.1.1. Non-defined Terms

1) Words and phrases used in Division B that are not included in the list of definitions in Article 1.4.1.2. of Division A shall have the meanings that are commonly assigned to them in the context in which they are used, taking into account the specialized use of terms by the various trades and professions to which the terminology applies.

2) Where objectives and functional statements are referred to in Division B, they shall be the objectives and functional statements described in Parts 2 and 3 of Division A.

3) Where acceptable solutions are referred to in Division B, they shall be the provisions stated in Parts 2 to 7.

1.2.1.2. Defined Terms

1) The words and terms in italics in Division B shall have the meanings assigned to them in Article 1.4.1.2. of Division A.

1.2.2. Symbols and Other Abbreviations

1.2.2.1. Symbols and Other Abbreviations

1) The symbols and other abbreviations in Division B shall have the meanings assigned to them in Article 1.4.2.1. of Division A and Article 1.3.2.1.

Section 1.3. Referenced Documents and Organizations

1.3.1. Referenced Documents

1.3.1.1. Effective Date

1) Unless otherwise specified herein, the documents referenced in this Code shall include all amendments, revisions, reaffirmations, reapprovals, addenda and supplements effective to 30 June 2012.

1.3.1.2. Applicable Editions

1) Where documents are referenced in this Code, they shall be the editions designated in Table 1.3.1.2. (See Appendix A.)

Table 1.3.1.2.
Documents Referenced in the National Fire Code of Canada 2010
 Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
API	ANSI/API 5L-2007	Line Pipe	4.5.2.1.(4)
API	ANSI/API 12B-2008	Bolted Tanks for Storage of Production Liquids	4.3.1.2.(1)
API	12D-2008	Field Welded Tanks for Storage of Production Liquids	4.3.1.2.(1)
API	12F-2008	Shop Welded Tanks for Storage of Production Liquids	4.3.1.2.(1)
API	620-2008	Design and Construction of Large, Welded, Low-Pressure Storage Tanks	4.3.1.3.(1)
API	650-2007	Welded Tanks for Oil Storage	4.3.1.2.(1)
API	653-2009	Tank Inspection, Repair, Alteration, and Reconstruction	Table 4.4.1.2.B.
API	1104-2005	Welding of Pipelines and Related Facilities	4.5.5.2.(1)
API	2000-2009	Venting Atmospheric and Low-Pressure Storage Tanks	4.3.4.1.(1)
ASME	BPVC-2010	Boiler and Pressure Vessel Code	4.3.1.3.(1) 4.5.9.5.(2) 4.5.9.6.(1)
ASME	B16.5-2009	Pipe Flanges and Flanged Fittings: NPS ½ Through NPS 24 Metric/Inch Standard	4.5.5.3.(1)
ASME	B31.3-2010	Process Piping	4.5.2.1.(5)
ASME/CSA	ASME A17.1-2010/CSA B44-10	Safety Code for Elevators and Escalators	7.2.2.1.(2)
ASTM	A 53/A 53M-10	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	4.5.2.1.(4)
ASTM	A 193/A 193M-11a	Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications	4.5.5.4.(1)
ASTM	D 56-05	Flash Point by Tag Closed Cup Tester	4.1.3.1.(1)
ASTM	D 93-11	Flash Point by Pensky-Martens Closed Cup Tester	4.1.3.1.(2)
ASTM	D 323-08	Vapor Pressure of Petroleum Products (Reid Method)	1.4.1.2.(1) ⁽³⁾
ASTM	D 3278-96	Flash Point of Liquids by Small Scale Closed-Cup Apparatus	4.1.3.1.(4)
ASTM	D 3828-09	Flash Point by Small Scale Closed Cup Tester	4.1.3.1.(3)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
CCBFC	NRCC 40383	User's Guide – NBC 1995, Fire Protection, Occupant Safety and Accessibility (Part 3)	7.1.1.2.(2) 7.2.3.1.(1) 7.2.3.3.(1) 7.3.2.1.(1) 7.3.3.1.(1) 7.3.4.1.(1) 7.3.5.1.(1) 7.3.6.1.(1) 7.3.7.1.(1) 7.3.8.1.(1) 7.3.9.1.(1) 7.3.10.1.(1) 7.3.11.1.(1) 7.3.12.1.(1) 7.3.13.1.(1) 7.3.14.1.(1) 7.3.15.1.(1)
CCBFC	NRCC 53301	National Building Code of Canada 2010	1.3.3.2.(1) ⁽³⁾ 1.4.1.2.(1) ⁽³⁾ 2.1.2.1.(1) 2.1.3.1.(1) 2.1.3.2.(1) 2.1.3.4.(1) 2.1.3.6.(1) 2.1.3.8.(1) 2.2.1.1.(1) 2.2.1.1.(2) 2.2.1.1.(3) 2.2.2.1.(1) 2.2.2.1.(2) 2.2.2.4.(2) 2.3.1.1.(1) 2.3.1.2.(1) ⁽⁴⁾ 2.3.1.4.(1) 2.4.1.2.(1) 2.5.1.1.(1) 2.6.1.1.(1) 2.6.1.5.(1) 2.6.1.9.(1) 2.6.2.1.(1) 2.7.1.1.(1) 2.7.1.2.(1) 2.7.1.4.(2) 2.7.3.1.(1) 2.8.1.1.(1) 2.8.2.4.(1) 2.8.2.5.(2) 2.8.3.1.(1) 2.8.3.2.(1) 2.9.1.1.(1) 2.9.3.6.(1) 2.10.1.1.(1) 2.11.1.1.(1) 2.13.2.1.(1) 3.1.4.1.(1) 3.2.4.2.(1) 3.2.6.2.(1) 3.2.7.5.(6) 3.2.7.5.(7) 3.2.7.8.(1) 3.2.7.12.(3) 3.2.8.2.(1)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
CCBFC	NRCC 53301 (continued)	National Building Code of Canada 2010	3.2.8.3.(1) 3.2.9.2.(1) 3.2.9.2.(2) 3.2.9.2.(3) 3.2.9.2.(4) 3.2.9.2.(5) 3.3.2.5.(1) 4.1.7.1.(1) 4.2.4.3.(2) 4.2.7.5.(2) 4.2.9.5.(1) 4.2.11.3.(1) 4.3.2.4.(2) 4.3.3.2.(1) 4.3.14.4.(1) 4.5.6.10.(2) 4.5.8.2.(3) 4.6.3.3.(2) 4.6.3.3.(3) 4.9.3.2.(1) 5.1.3.1.(1) 5.3.3.4.(1) 5.5.2.2.(1) 5.5.4.1.(1) 5.5.4.2.(1) 5.5.4.3.(1) 5.5.4.4.(1) 5.6.1.6.(1) 5.6.1.6.(2) 5.6.1.8.(2) 5.6.1.20.(1) 7.1.1.1.(1) 7.1.1.2.(1) 7.1.1.2.(2) 7.1.1.4.(2)
CGSB	CAN/CGSB-4.162-M80	Hospital Textiles – Flammability Performance Requirements	2.3.2.3.(1)
CNSC	SOR/2000-209	Nuclear Safety and Control Act (S.C. 1997, C.9)	3.1.1.2.(1)
CPPI	1990	Using the CPPI Colour-Symbol System to Mark Equipment and Vehicles for Product Identification	4.3.1.7.(1) 4.5.4.1.(3) 4.5.7.6.(1)
CSA	B51-09	Boiler, Pressure Vessel, and Pressure Piping Code	4.3.1.3.(2)
CSA	CAN/CSA-B108-99	Natural Gas Fuelling Stations Installation Code	4.6.1.1.(2)
CSA	B139-09	Installation Code for Oil-Burning Equipment	4.1.1.1.(3) 4.3.13.6.(1) 5.6.1.10.(1)
CSA	B149.1-10	Natural Gas and Propane Installation Code	3.1.1.4.(2) 3.1.1.4.(3) 4.6.1.1.(2) 5.6.1.10.(1)
CSA	B149.2-10	Propane Storage and Handling Code	3.1.1.4.(2) 3.2.8.2.(3) 4.6.1.1.(2)
CSA	B306-M1977	Portable Fuel Tanks for Marine Use	4.2.3.1.(1)
CSA	B346-M1980	Power-Operated Dispensing Devices for Flammable Liquids	4.6.3.1.(1)
CSA	B376-M1980	Portable Containers for Gasoline and Other Petroleum Fuels	4.2.3.1.(1)
CSA	B620-09	Highway Tanks and TC Portable Tanks for the Transportation of Dangerous Goods	4.2.3.1.(1)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
CSA	C22.1-12	Canadian Electrical Code, Part I	4.1.4.1.(1) 4.1.4.1.(2) 5.1.2.1.(1) 5.1.2.2.(1) 5.3.1.2.(2) 5.3.1.2.(3) 5.3.1.10.(2) 5.5.3.4.(1) 5.6.1.9.(3)
CSA	C282-09	Emergency Electrical Power Supply for Buildings	6.5.1.1.(1) 6.5.1.4.(1)
CSA	CAN/CSA-W117.2-06	Safety in Welding, Cutting and Allied Processes	5.2.1.1.(2)
CSA	Z32-09	Electrical Safety and Essential Electrical Systems in Health Care Facilities	6.5.1.1.(2)
CSA	Z245.1-07	Steel Pipe	4.5.2.1.(4)
HC	R.S.C., 1985, c. H-3	Hazardous Products Act	4.2.3.2.(2)
HC	Hazardous Products Act, Part II	Workplace Hazardous Materials Information System (WHMIS)	Table 3.2.7.1. 3.2.7.15.(2)
HC	2002, c. 28	Pest Control Products Act	4.2.3.2.(2)
IMO	2010	International Maritime Dangerous Goods Code	3.3.4.8.(1)
NACE	SP0169-2007	Control of External Corrosion on Underground or Submerged Metallic Piping Systems	4.5.3.1.(1)
NACE	SP0285-2011	External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection	4.3.10.1.(1)
NFPA	10-2010	Portable Fire Extinguishers (except paragraph 4.4.1)	2.1.5.1.(2) 6.2.1.1.(1)
NFPA	11-2010	Low-, Medium-, and High-Expansion Foam	2.1.3.5.(3) 4.3.2.5.(2)
NFPA	12-2011	Carbon Dioxide Extinguishing Systems	2.1.3.5.(3)
NFPA	12A-2009	Halon 1301 Fire Extinguishing Systems	2.1.3.5.(3)
NFPA	12B-1990	Halon 1211 Fire Extinguishing Systems	2.1.3.5.(3)
NFPA	13-2013 ⁽⁶⁾	Installation of Sprinkler Systems	3.2.1.1.(1) 3.2.2.4.(3) 3.2.3.3.(1) 3.2.4.3.(1) 3.2.6.3.(4)
NFPA	15-2012	Water Spray Fixed Systems for Fire Protection	2.1.3.5.(4) 4.3.2.5.(2)
NFPA	16-2011	Installation of Foam-Water Sprinkler and Foam-Water Spray Systems	2.1.3.5.(4)
NFPA	17-2009	Dry Chemical Extinguishing Systems	2.1.3.5.(3)
NFPA	17A-2009	Wet Chemical Extinguishing Systems	2.1.3.5.(3)
NFPA	18-2011	Wetting Agents	2.1.3.5.(5)
NFPA	25-2011	Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems	6.4.1.1.(1)
NFPA	30-2012	Flammable and Combustible Liquids Code	4.2.7.6.(1)
NFPA	30B-2011	Manufacture and Storage of Aerosol Products	3.2.5.2.(1) 3.2.5.5.(1)
NFPA	32-2011	Drycleaning Plants	5.4.2.1.(1)
NFPA	33-2011	Spray Application Using Flammable or Combustible Materials	5.4.5.2.(1)
NFPA	34-2011	Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids	5.4.6.2.(1)
NFPA	37-2010	Installation and Use of Stationary Combustion Engines and Gas Turbines	4.3.13.2.(1)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
NFPA	51-2007	Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes	5.2.2.4.(1)
NFPA	68-2007	Explosion Protection by Deflagration Venting	3.2.8.2.(1) 4.3.14.3.(1) 4.9.3.1.(1) 4.9.4.2.(1) 5.3.1.6.(2)
NFPA	69-2008	Explosion Prevention Systems	4.3.2.5.(2) 4.9.4.2.(1) 5.3.1.7.(2)
NFPA	82-2009	Incinerators and Waste and Linen Handling Systems and Equipment	2.6.2.2.(1)
NFPA	86-2011	Ovens and Furnaces	5.4.1.2.(1)
NFPA	91-2010	Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids	3.2.2.3.(5) 4.1.7.2.(5)
NFPA	96-2011	Ventilation Control and Fire Protection of Commercial Cooking Operations	2.6.1.9.(2)
NFPA	505-2011	Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations	3.1.3.1.(1)
NFPA	664-2012	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	5.3.1.3.(2) 5.3.2.1.(1)
NFPA	705-2009	Field Flame Test for Textiles and Films	2.3.2.2.(1) 2.9.2.1.(1)
NRCan	R.S.C., 1985, c. E-17	Explosives Act	3.1.1.3.(1) 5.1.1.2.(1)
NRCan	2010	Display Fireworks Manual	5.1.1.3.(1)
TC	SOR/96-433	Canadian Aviation Regulations – Part III	2.13.1.1.(1)
TC	SOR/2001-286	Transportation of Dangerous Goods Regulations (TDGR)	1.4.1.2.(1) ⁽³⁾ 3.1.2.1.(1) 3.1.2.5.(1) Table 3.2.7.1. 3.2.7.1.(2) 3.2.7.14.(1) 3.2.7.14.(4) 3.2.7.15.(2) 3.3.4.1.(3) 4.1.1.1.(3) 4.2.3.1.(1) 4.2.3.2.(2)
TC	2001	Standards Respecting Pipeline Crossings Under Railways	4.5.6.5.(3)
TC	SOR/82-1015	Railway Prevention of Electric Sparks Regulations	4.7.4.5.(2) 4.8.5.1.(1)
TC	General Order No. O-32, C.R.C., c1148	Flammable Liquids Bulk Storage Regulations	4.5.6.5.(4) 4.7.2.2.(1) 4.7.4.1.(2)
ULC	CAN/ULC-S109-03	Flame Tests of Flame-Resistant Fabrics and Films	2.3.2.1.(1)
ULC	CAN/ULC-S137-07	Fire Growth of Mattresses (Open Flame Test)	2.3.2.3.(2)
ULC	CAN/ULC-S503-05	Carbon-Dioxide Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S504-12	Dry Chemical Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S507-05	Water Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S508-02	Rating and Fire Testing of Fire Extinguishers	2.1.5.1.(4)
ULC	CAN/ULC-S512-M87	Halogenated Agent Hand and Wheeled Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S531-02	Smoke-Alarms	2.1.3.3.(1)
ULC	CAN/ULC-S536-04	Inspection and Testing of Fire Alarm Systems	6.3.1.2.(1)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
ULC	CAN/ULC-S552-02	Maintenance and Testing of Smoke Alarms	6.7.1.1.(1)
ULC	CAN/ULC-S553-02	Installation of Smoke-Alarms	2.1.3.3.(3)
ULC	CAN/ULC-S554-05	Water Based Agent Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S561-03	Installation and Services for Fire Signal Receiving Centres and Systems	6.3.1.3.(1)
ULC	CAN/ULC-S566-05	Halocarbon Clean Agent Fire Extinguishers	2.1.5.1.(3)
ULC	CAN/ULC-S601-07	Shop Fabricated Steel Aboveground Tanks for Flammable and Combustible Liquids	4.3.1.2.(1) 4.3.3.2.(1)
ULC	ULC-S601(A)-2001	Refurbishing of Steel Aboveground Horizontal Tanks for Flammable and Combustible Liquids	4.3.1.10.(2)
ULC	CAN/ULC-S602-07	Aboveground Steel Tanks for Fuel Oil and Lubricating Oil	4.3.1.2.(1)
ULC	ULC-S603-00	Steel Underground Tanks for Flammable and Combustible Liquids	4.3.1.2.(1) 4.4.3.2.(4)
ULC	ULC-S603(A)-2001	Refurbishing of Steel Underground Tanks for Flammable and Combustible Liquids	4.3.1.10.(3)
ULC	CAN/ULC-S603.1-11	External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids	4.3.1.2.(1) 4.3.8.6.(1) 4.3.10.1.(1) 4.5.3.1.(1)
ULC	CAN/ULC-S612-07	Hose and Hose Assemblies for Flammable and Combustible Liquids	4.6.5.1.(1)
ULC	ULC-S615-98	Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids	4.3.1.2.(1) 4.3.8.6.(2) 4.4.3.2.(4)
ULC	ULC-S615(A)-2002	Refurbishing of Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids	4.3.1.10.(3)
ULC	CAN/ULC-S620-07	Hose Nozzle Valves for Flammable and Combustible Liquids	4.5.7.1.(2) 4.6.5.2.(1)
ULC	ULC-S630(A)-2001	Refurbishing of Steel Aboveground Vertical Tanks for Flammable and Combustible Liquids	4.3.1.10.(2)
ULC	CAN/ULC-S633-99	Flexible Underground Hose Connectors for Flammable and Combustible Liquids	4.5.6.14.(2)
ULC	CAN/ULC-S642-07	Compounds and Tapes for Threaded Pipe Joints	4.5.5.1.(1)
ULC	ULC-S644-00	Emergency Breakaway Fittings for Flammable and Combustible Liquids	4.6.5.2.(4)
ULC	ULC-S651-07	Emergency Valves for Flammable and Combustible Liquids	4.5.7.1.(3) 4.6.6.3.(1)
ULC	CAN/ULC-S652-08	Tank Assemblies for the Collection, Storage and Removal of Used Oil	4.3.1.2.(1)
ULC	CAN/ULC-S653-06	Aboveground Steel Contained Tank Assemblies for Flammable and Combustible Liquids	4.3.1.2.(1)
ULC	ULC-S655-98	Aboveground Protected Tank Assemblies for Flammable and Combustible Liquids	4.3.1.2.(1) 4.3.2.1.(7) 4.6.2.1.(3)
ULC	CAN/ULC-S660-08	Nonmetallic Underground Piping for Flammable and Combustible Liquids	4.5.2.1.(3) 4.5.6.14.(2)
ULC	ULC-S661-10	Overfill Protection Devices for Flammable and Combustible Liquid Storage Tanks	4.3.1.8.(1) 4.3.1.8.(2)
ULC	ULC/ORD-C30-1995	Safety Containers	4.1.5.8.(2) 4.2.3.1.(1) 4.2.6.4.(1) 5.5.5.2.(2)
ULC	ULC/ORD-C58.19-1992	Spill Containment Devices for Underground Flammable Liquid Storage Tanks	4.3.9.2.(2)

Table 1.3.1.2. (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
ULC	ULC/ORD-C107.12-1992	Line Leak Detection Devices for Flammable Liquid Piping	4.4.2.1.(11) 4.4.3.4.(2) 4.4.4.2.(1)
ULC	ULC/ORD-C107.21-1992	Under-Dispenser Sumps	4.3.9.2.(1) 4.6.3.2.(1)
ULC	ULC/ORD-C142.5-1992	Concrete Encased Steel Aboveground Tank Assemblies for Flammable and Combustible Liquids	4.3.1.2.(1)
ULC	ULC/ORD-C536-1998	Flexible Metallic Hose	4.5.6.14.(2)
ULC	ULC/ORD-C558-2009	Guide for the Investigation of Industrial Trucks, Internal Combustion Engine-Powered	3.1.3.1.(2)
ULC	ULC/ORD-C583-2009	Guide for the Investigation of Electric Battery Powered Industrial Trucks	3.1.3.1.(3)
ULC	ULC/ORD-C842-84	Guide for the Investigation of Valves for Flammable and Combustible Liquids	4.5.7.1.(1)
ULC	ULC/ORD-C1275-84	Storage Cabinets for Flammable Liquid Containers	4.2.10.5.(1)

Notes to Table 1.3.1.2.:

- (1) Some documents may have been reaffirmed or reapproved. Check with the applicable issuing agency for up-to-date information.
- (2) Some titles have been abridged to omit superfluous wording.
- (3) Code reference is in Division A.
- (4) Code reference is in Division C.
- (5) Notwithstanding the effective date stated in Sentence 1.3.1.1.(1), the 2013 edition of NFPA 13 is referenced as it better meets the intent of the Code.

1.3.2. Organizations**1.3.2.1. Abbreviations of Proper Names**

1) The abbreviations of proper names in this Code shall have the meanings assigned to them in this Article (the appropriate addresses of the organizations are shown in brackets).

ACGIH	American Conference of Governmental Industrial Hygienists (1330 Kemper Meadow Drive, Cincinnati, Ohio 45240-1634 U.S.A.; www.acgih.org)
API	American Petroleum Institute (1220 L Street NW, Washington, D.C. 20005-4070 U.S.A.; www.api.org)
ASME	American Society of Mechanical Engineers (Three Park Avenue, New York, New York 10016-5990 U.S.A.; www.asme.org)
ASTM	American Society for Testing and Materials International (100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959 U.S.A.; www.astm.org)
CCBFC	Canadian Commission on Building and Fire Codes (National Research Council of Canada, Ottawa, Ontario K1A 0R6; www.nationalcodes.ca)
CCME	Canadian Council of Ministers of the Environment (360-123 Main Street, Winnipeg, Manitoba R3C 1A3; www.ccme.ca)
CGA	Compressed Gas Association (4221 Walney Road, 5th Floor, Chantilly, Virginia 20151-2923 U.S.A.; www.cganet.com)
CGSB	Canadian General Standards Board (Place du Portage, Phase III, 6B1, 11 Laurier Street, Gatineau, Quebec K1A 1G6; www.pwgsc.gc.ca/cgsb)
CNSC	Canadian Nuclear Safety Commission (280 Slater Street, P.O. Box 1046, Station B, Ottawa, Ontario K1P 5S9; www.cnscc.gc.ca)
CPPI	Canadian Petroleum Products Institute (275 Slater Street, Suite 1000, Ottawa, Ontario K1P 5H9; www.cppei.ca)

CSA	CSA Group (5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6; www.csagroup.ca)
EPA	Environmental Protection Agency (1200 Pennsylvania Avenue NW, Washington, D.C. 20460 U.S.A.; www.epa.gov)
FM Global ...	FM Global (1151 Boston-Providence Turnpike, P.O. Box 9102, Norwood, Massachusetts 02062 U.S.A.; www.fmglobal.com)
HC	Health Canada (Address Locator 0900C2, Ottawa, Ontario K1A 0K9; www.hc-sc.gc.ca)
IMO	International Maritime Organization (4 Albert Embankment, London, SE1 7SR United Kingdom; www.imo.org)
NBC	National Building Code of Canada 2010 (see CCBFC)
NFC	National Fire Code of Canada 2010 (see CCBFC)
NFPA	National Fire Protection Association (1 Batterymarch Park, Quincy, Massachusetts 02169-7471 U.S.A.; www.nfpa.org)
NRC	National Research Council of Canada (Ottawa, Ontario K1A 0R6; www.nrc-cnrc.gc.ca)
NRCan	Natural Resources Canada (580 Booth Street, Ottawa, Ontario K1A 0E4; www.nrcan-rncan.gc.ca)
NRC-IRC	Institute for Research in Construction (National Research Council of Canada, Ottawa, Ontario K1A 0R6; irc.nrc-cnrc.gc.ca)
OCIMF	Oil Companies International Marine Forum (27 Queen Anne's Gate, London, SW1H 9BU United Kingdom; www.ocimf.com)
RMA	Rubber Manufacturers Association, Inc. (1400 K Street NW, Suite 900, Washington, D.C. 20005 U.S.A.; www.rma.org)
SFPE	Society of Fire Protection Engineers (7315 Wisconsin Avenue, Suite 620E, Bethesda, Maryland 20814 U.S.A.; www.sfpe.org)
TC	Transport Canada (330 Sparks Street, Ottawa, Ontario K1A 0N5; www.tc.gc.ca)
UL	Underwriters Laboratories Inc. (333 Pfingsten Road, Northbrook, Illinois 60062-2096 U.S.A.; www.ul.com)
ULC	Underwriters Laboratories of Canada (7 Underwriters Road, Toronto, Ontario M1R 3B4; www.ulc.ca)
UN	United Nations (UN Headquarters, 760 United Nations Plaza, New York, New York 10017 U.S.A.; www.un.org)

Appendix A

Explanatory Material

A-1.1.2.1.(1) Objectives and Functional Statements Attributed to Acceptable

Solutions. The objectives and functional statements attributed to each Code provision are shown in tables at the end of each Part in Division B.

Many provisions in Division B serve as modifiers of or pointers to other provisions or serve other clarification or explanatory purposes. In most cases, no objectives and functional statements have been attributed to such provisions, which therefore do not appear in the above-mentioned tables.

For provisions that serve as modifiers of or pointers to other referenced provisions and that do not have any objectives and functional statements attributed to them, the objectives and functional statements that should be used are those attributed to the provisions they reference.

A-1.3.1.2.(1) Where documents are referenced in the Appendices of this Code, they shall be the editions designated in Table A-1.3.1.2.(1).

Table A-1.3.1.2.(1)
Documents Referenced in the Appendices of the National Fire Code of Canada 2010

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
ACGIH	27th Edition	Industrial Ventilation: A Manual of Recommended Practice for Design	A-3.2.7.3.(1)(b)
API	1104-2005	Welding of Pipelines and Related Facilities	A-4.5.10.7.(6)
API	RP 1604-1996	Closure of Underground Petroleum Storage Tanks	A-4.3.16.1.(1)
API	2000-2009	Venting Atmospheric and Low-Pressure Storage Tanks	A-4.3.13.10.(1)
API	RP 2003-2008	Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents	A-4.7.4.5.
API	2009-2002	Safe Welding and Cutting Practices in Refineries, Gasoline Plants, and Petrochemicals Plants	A-5.2.3.4.(1)(b)
API	2015-2001	Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry From Decommissioning Through Recommissioning	A-5.2.3.4.(1)(b)
API	RP 2200-2010	Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines	A-4.5.10.7.(6)
API	RP 2201-2003	Safe Hot Tapping Practices in the Petroleum and Petrochemical Industries	A-4.5.10.7.(6) A-5.2.3.4.(1)(b)
API	RP 2207-2007	Preparing Tank Bottoms for Hot Work	A-5.2.3.4.(1)(b)
ARPM	IP-2-2009	Hose Handbook, Eighth Edition	A-4.8.8.1.(1)(a)
ASTM	D 5-06e1	Penetration of Bituminous Materials	A-4.1.3.1.
ASTM	D 3278-96	Flash Point of Liquids by Small Scale Closed-Cup Apparatus	A-4.1.3.1.
ASTM	D 4359-90	Determining Whether a Material Is a Liquid or a Solid	A-4.1.3.1.
CCBFC	NRCC 30619	National Building Code of Canada 1990	A-2.1.2.1.(1)
CCBFC	NRCC 47666	National Building Code of Canada 2005	A-2.1.3.1.(1)

This Appendix is included for explanatory purposes only and does not form part of the requirements. The numbers that introduce each Appendix Note correspond to the applicable requirements in this Division.

Table A-1.3.1.2.(1) (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
CCBFC	NRCC 53301	National Building Code of Canada 2010	A-1.1.1.1.(1) ⁽³⁾ A-1.4.1.2.(1) ⁽³⁾ A-2.1.3.1.(1) A-2.1.3.4.(1) A-2.1.3.6.(1) A-2.7.1.3.(1) A-2.7.1.4.(2) A-2.7.3.1.(1) A-2.9.3.5.(1) A-3.2.2.3.(5) A-3.2.7.9.(1) A-3.2.7.12.(3) A-3.2.9.2.(5) A-4.1.7.1.(1) A-4.2.7.5.(2) A-5.6.1.6. A-5.6.1.8. A-6.1.1.2.(1)
CCBFC	NRCC 53302	National Plumbing Code of Canada 2010	A-4.1.6.2.(2)
CCME	PN 1326	Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products	A-4.3.16.1.(1) A-4.4.2.1.(3)
CGA	P-1 (2008)	Safe Handling of Compressed Gases in Containers	A-3.1.1.4.(1)(a)
CSA	B139-09	Installation Code for Oil-Burning Equipment	A-4.1.1.1.(3)(b) A-4.3.13.4.(1)(b)
CSA	C22.1-12	Canadian Electrical Code, Part I	A-4.10.3.3.(1) A-5.1.2.1.(1)
CSA	C282-09	Emergency Electrical Power Supply for Buildings	A-6.5.1.1.(2)
CSA	Z32-09	Electrical Safety and Essential Electrical Systems in Health Care Facilities	A-6.5.1.1.(2)
CSA	PLUS 2203-01	Hazardous Locations: A Guide for the Design, Testing, Construction, and Installation of Equipment in Explosive Atmospheres	A-4.1.4.1.(1)
EPA	510-B-93-004	Doing Inventory Control Right for Underground Storage Tanks	A-4.4.2.1.(2)
EPA	510-B-95-009	Introduction to Statistical Inventory Reconciliation For Underground Storage Tanks	A-4.4.2.1.(4)
EPA	530/UST-90/007	Evaluating Leak Detection Methods: Statistical Inventory Reconciliation Methods (SIR)	A-4.4.2.1.(4)
EPA	530/UST-90/008	Evaluating Leak Detection Methods: Vapor-Phase Out-of-Tank Product Detectors	A-4.4.2.1.(3)
EPA	530/UST-90/009	Evaluating Leak Detection Methods: Liquid-Phase Out-of-Tank Product Detectors	A-4.4.2.1.(3)
FM Global	Data Sheet 7-50 (2012)	Compressed Gases in Cylinders	A-3.2.8.2.(2)
FM Global	Data Sheet 7-83 (2012)	Drainage and Containment Systems for Ignitable Liquids	A-4.1.6.1.(1)
HC	Hazardous Products Act, Part II	Workplace Hazardous Materials Information System (WHMIS)	A-3.2.7.6.(2) A-3.2.7.13.(1)
HC	SOR/88-66	Controlled Products Regulations	A-3.2.5.2.(1)
HC	SOR/2001-269	Consumer Chemicals and Containers Regulations, 2001	A-3.2.5.2.(1)
NFPA	2008 Edition	Fire Protection Handbook, Twentieth Edition	A-2.4.1.3.(1)
NFPA	12A-2009	Halon 1301 Fire Extinguishing Systems	A-2.1.3.5.(3)(c) and (d)
NFPA	12B-1990	Halon 1211 Fire Extinguishing Systems	A-2.1.3.5.(3)(c) and (d)
NFPA	13-2013 ⁽⁴⁾	Installation of Sprinkler Systems	A-2.1.3.6.(1) A-3.2.1.1.(1)(a) A-3.2.2.4.(3) A-3.2.3.3.(2)

Table A-1.3.1.2.(1) (Continued)

Issuing Agency	Document Number ⁽¹⁾	Title of Document ⁽²⁾	Code Reference
NFPA	15-2012	Water Spray Fixed Systems for Fire Protection	A-4.1.6.1.(1)
NFPA	30-2012	Flammable and Combustible Liquids Code	A-4.1.1.1.(2) A-4.1.4.1.(1) A-4.1.6.1.(1) A-4.2.7.6.(1) A-4.3.16.1.(1)
NFPA	30B-2011	Manufacture and Storage of Aerosol Products	A-3.2.5.2.(1)
NFPA	36-2009	Solvent Extraction Plants	A-4.1.1.1.(2)
NFPA	55-2010	Compressed Gases and Cryogenic Fluids Code	A-3.1.1.4.
NFPA	61-2008	Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities	A-5.3.1.3.(2)
NFPA	80A-2012	Protection of Buildings from Exterior Fire Exposures	A-2.4.1.1.(6)
NFPA	91-2010	Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids	A-5.3.1.3.(2)
NFPA	120-2010	Fire Prevention and Control in Coal Mines	A-5.3.1.3.(2)
NFPA	326-2010	Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair	A-5.6.1.11.(4)
NFPA	484-2012	Combustible Metals	A-5.3.1.3.(2)
NFPA	497-2012	Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas	A-4.1.4.1.(1)
NFPA	654-2006	Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids	A-5.3.1.3.(2)
NFPA	655-2012	Prevention of Sulfur Fires and Explosions	A-5.3.1.3.(2)
NFPA	664-2012	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities	A-5.3.1.3.(2)
NFPA	705-2009	Field Flame Test for Textiles and Films	A-2.3.2.2.(1)
NRCan	R.S.C., 1985, c. E-17	Explosives Act	A-3.2.9.1.(1)
OCIMF	2009	Guide to Manufacturing and Purchasing Hoses for Offshore Moorings, 5th Edition	A-4.8.8.1.(1)(a)
SFPE	4th Edition	Handbook of Fire Protection Engineering	A-4.1.6.1.(1)
TC	SOR/2001-286	Transportation of Dangerous Goods Regulations (TDGR)	A-3.2.7.6.(2) A-4.1.2.1. A-4.2.2.3.(2)
TC	SOR/2007-86	Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals	A-4.8.8.1.(1)(a)
ULC	ULC/ORD-C58.4-2005	Double Containment Fibre Reinforced Plastic Linings for Flammable and Combustible Liquid Storage Tanks	A-4.3.1.10.(3)
ULC	ULC/ORD-C58.12-1992	Leak Detection Devices (Volumetric Type) for Underground Flammable Liquid Storage Tanks	A-4.4.2.1.(5) A-4.4.2.1.(7) A-4.4.2.1.(10)(a)
ULC	ULC/ORD-C58.14-1992	Non-Volumetric Leak Detection Devices for Underground Flammable Liquid Storage Tanks	A-4.4.2.1.(7) A-4.4.2.1.(10)(a)
ULC	ULC/ORD-C410A-1994	Absorbents for Flammable and Combustible Liquids	A-4.1.6.3.(3)(b)

Notes to Table A-1.3.1.2.(1):

- (1) Some documents may have been reaffirmed or reapproved. Check with the applicable issuing agency for up-to-date information.
- (2) Some titles have been abridged to omit superfluous wording.
- (3) Code reference is in Division A.
- (4) Notwithstanding the effective date stated in Sentence 1.3.1.1.(1), the 2013 edition of NFPA 13 is referenced as it better meets the intent of the Code.

A-2.1.2.1.(1) The National Building Code of Canada 1990 introduced changes to the method of determining building height. Application of the current method to existing buildings for the purposes of this Code could result in certain buildings being reclassified as higher buildings. For this reason, the NFC suggests that building height is that which was established by the building code that was applicable at the time of construction in the case of original construction, or at the time of alteration if additional storeys have been added to the building.

A-2.1.2.2.(1) Arena-type buildings are often used for events such as community dances, rallies and trade shows. These events may increase the occupant and fuel loads beyond that for which the space was designed. To ensure safety during such events, additional egress facilities may be required to compensate for the additional occupant load and, in some cases, additional fire suppression measures may be required to compensate for the increased fuel load.

Large public corridors in mercantile occupancies are also used on a temporary basis for community activities, merchandising and for special displays. In these cases, additional egress facilities and fire suppression may be needed, depending on the increase in hazard.

A-2.1.3.1.(1) The National Building Code of Canada is most often applied to existing buildings when an owner wishes to rehabilitate a building, change its use, or build an addition; or when an enforcement authority decrees that a building, or a class of buildings, be altered for reasons of public safety. It is not intended that either the NBC or the NFC be used to enforce the retrospective application of new requirements in the NBC to existing buildings. Although the NFC could be interpreted to require the installation of fire alarm, standpipe and hose and automatic sprinkler systems in an existing building for which there were no requirements before the National Building Code of Canada 2005 was issued, it is the intent of the Canadian Commission on Building and Fire Codes that the NFC not be applied in this manner to these buildings.

It is usually difficult to change structural features of an existing building when undertaking alterations or additions, but the installation of “active” fire protection systems, such as alarms, sprinklers and standpipes, in existing buildings may be possible. These systems may be considered as contributing to an adequate degree of life safety in cases where the structural features of a building do not conform to the NBC.

Sentence 2.1.3.1.(1) is intended to address the installation of fire alarm, sprinkler and standpipe systems in existing buildings presently not so equipped, and in existing buildings that do not provide an acceptable level of safety to meet the current installation standards specified in the NBC. It is not intended that existing fire protection systems that provide an acceptable level of life safety be upgraded with each new edition of the NBC or in conjunction with the inclusion of new requirements not in force at the time that a building was constructed. The authority having jurisdiction is expected to use discretion in enforcing this requirement. The authority having jurisdiction may accept alternatives to strict compliance with the NBC as provided for in Clause 1.2.1.1.(1)(b) of Division A and its Appendix Note. (See also Appendix Note A-1.1.1.1.(1) of Division A and Appendix Note A-1.1.1.1.(1) of Division A of the NBC.)

A-2.1.3.4.(1) Editions of the NBC prior to 2005 permitted the use of combustible sprinkler piping for wet pipe sprinkler systems in residential and light-hazard occupancies on condition that the piping was protected from exposure to a fire in the space beneath. Article 2.1.3.4. requires that the necessary protection of the piping be maintained so that the performance of the sprinkler system will not be compromised in the event of fire. Some of the conditions included restricting use of the piping to light-hazard occupancies, the piping must be a wet system, use of steel suspension grids and correct tile weight, and integrity of the fire protection covering.

A-2.1.3.5.(3)(c) and (d) Concern over the impact of halons on the environment is resulting in changes to the regulations of various agencies that affect their use and release to the atmosphere and their reduction, recycling and eventual phase-out as fire extinguishment agents. Standards referenced in the NFC may not reflect the current status of requirements developed by certain agencies regarding the installation, use and testing of fire suppression systems that employ halons.

The installation of new halon fire suppression systems is prohibited following the international ban on halon gas production. However, both NFPA 12A, “Halon 1301 Fire Extinguishing Systems,” and NFPA 12B, “Halon 1211 Fire Extinguishing Systems,” are still relevant to the maintenance, decommissioning and recycling of existing halon fire suppression systems.